

IN THE CLAIMS:

1 1-28. (Cancelled)

1 29. (Currently Amended) A powder compression molding and assembly system
2 comprising:

3 a rotary disk;

4 a plurality of molding units mounted on the rotary disk at spaced circumferential
5 locations, each of said plurality of molding units including a cylindrical die, a lower plunger
6 concentric with said cylindrical die, an upper plunger, and a center pin concentric with said
7 lower plunger for defining an annular space within said die for molding powder into tubular
8 configurations, as the plurality of the molding units are moved along a circular path;

9 a pair of pressure rollers provided at least at two equally spaced locations on the
10 movement path of the plurality of molding units for pressure engagement with the upper plunger
11 and the lower plunger, respectively, of each of said plurality of molding units;

12 a feed station for loading each cylindrical die with a powder material to be
13 molded by pressure engagement with the upper plunger and lower plunger into a pellet;

14 a plurality of operating units provided respectively to each of the plurality of
15 molding units and moved along a concentric path with the molding units, for transferring and
16 retractably positioning a case above and in alignment with the die of each of the molding units;
17 and

18 an insertion assembly station mounted at an appropriate position on a movement
19 path of the molding units for inserting the molded pellet into a case operatively positioned
20 outside of and in alignment with the die by an operating unit.

1 30. (Previously Presented) The powder compression molding and assembly system
2 according to Claim 29, further comprising a first cam provided immediately downstream of the
3 pair of pressure rollers in a direction of rotation of the rotary disk, for lifting up the center pin
4 and the lower plunger of the molding unit.

1 31. (Previously Presented) The powder compression molding and assembly system
2 according to Claim 30 further comprising a stationary second cam provided in coaxial
3 arrangement with the rotary disk, wherein each of said plurality of loading units includes a cam
4 follower for engagement with said second cam.

1 32. (Previously Presented) The powder compression molding and assembly system
2 according to Claim 31, wherein said stationary second cam comprises a first cam surface for
3 causing the loading units to track the concentric path with the molding units, and a second cam
4 surface for causing the loading units to advance towards between the upper plunger and the
5 lower plunger of the molding units.

1 33. (Previously Presented) The powder compression molding and assembly system
2 according to Claim 32, wherein each of the operating units comprises an operating lever
3 operatively connected to said cam follower, a support arm connected to said operating lever and
4 rotatably supported on the rotary disk, a case holding means mounted on said support arm, and a
5 convey jig detachably supported on the case holding means, said convey jig supporting the
6 cylindrical container such that an open end of the case faces downwards.

1 34. (Previously Presented) The powder compression molding and assembly system
2 according to Claim 33, further comprising a support plate for closing and opening the open end
3 of the case to prevent the pellet from falling out of the case.

1 35. (Previously Presented) The powder compression molding and assembly system
2 according to Claim 29, wherein said pair of pressure rollers are provided at a plurality of
3 locations corresponding to a number of the tubular configurations to be inserted into one case.

1 36. (Previously Presented) The powder compression molding and assembly system
2 according to Claim 35, further comprising a means for supplying a plurality of cases one after
3 another to each of the operating units, said means for supplying the cases being provided
4 downstream of one of said pressure rollers in a direction of rotation of the rotary disk.

1 37. (Previously Presented) The powder compression molding and assembly system
2 according to Claim 36, wherein the cases are supplied to the operating units as being held with
3 respective convey jigs.

1 38. (Previously Presented) The powder compression molding and assembly system
2 according to Claim 36, further comprising a means for receiving the cases one after another from
3 each of the case holding means after a predetermined number of tubular configurations have
4 been inserted into the cases, said means for receiving the cases being provided downstream of
5 one of said pressure rollers in a direction of rotation of the rotary disk.

1 39. (Previously Presented) The powder compression molding and assembly system
2 according to Claim 38, wherein the cases are transferred from the operating units to a next step
3 as being held with respective convey jigs.

1 40-46. (Cancelled)

1 47. (Previously Presented) A powder compression molding and assembly system
2 according to claim 29, wherein a plurality of the insertion assembly stations are provided so that
3 the pellets formed at each of the molding units located between the insertion assembly stations
4 are inserted into the case immediately after the compression molding at the next insertion
5 assembly stations.

1 48. (Previously Presented) A powder compression molding and assembly system
2 according to claim 47, wherein the insertion assembly station is provided in a pair, and further
3 comprises:

4 a case carrying-in means for feeding the cases into one insertion assembly station,
5 a series of case holding means for holding and conveying the cases loaded with the pellet to
6 another insertion assembly station; and

7 a case carrying-out means for removing the cases after being loaded with the
8 pellet at each insertion assembly station.

1 49. (Currently Amended) A powder compression molding and assembly system
2 according to claim 49- 48, wherein each of the case holding means is mounted on the rotary disk
3 corresponding to each molding unit and is constructed to hold and retract the case loaded with
4 the pellet at the first insertion assembly station to its retracted position beside the molding unit,

5 and to advance the case to the movement path of the molding units at the next insertion assembly
6 station.

1 50. (Previously Presented) A powder compression molding and assembly system
2 according to claim 48, wherein the case is held by a conveyor member, which is conveyed and
3 positioned by the actions of the case carrying-in means, the case holding means, and the case
4 carrying-out means.

1 51. (Previously Presented) A powder compression and molding assembly system
2 according to claim 48, wherein the case holding means is mounted to one end of an operating
3 lever which is mounted on the rotary disk corresponding to each molding unit, the operating
4 lever being rotatably connected to the rotary disk with a cam follower at the other end thereof
5 engaged with a cam disposed coaxially with the rotary disk, the cam having a retraction cam
6 surface for holding the case holding means at its retracted position beside the molding unit and
7 an operating cam surface for causing the case holding means to advance to and retract from the
8 movement path of the molding unit.

1 52. (Previously Presented) The powder compression molding and assembly system
2 of Claim 29 wherein the center pin extends into the dry cell housing container during the ejection
3 of each molded tubular electrode pellet.

1 53. (Previously Presented) The powder compression molding and assembly system of
2 Claim 52 further comprising a first cam provided immediately downstream of the pair of
3 pressure rollers in a direction of rotation of the rotary disk, for lifting up the center pin and the
4 lower plunger of the molding unit.

1 54. (Currently Amended) The power compression molding and assembly system of
2 Claim ~~56~~ 53 further comprising a stationary second cam provided in coaxial arrangement with
3 the rotary disk, wherein each of said plurality of operating units includes a cam follower for
4 engagement with said second cam.

1 55. (Currently Amended) The power compression molding and assembly system of
2 Claim ~~56~~ 54:

3 wherein said stationary second cam comprises a first cam surface for causing the
4 operating units to track the concentric path with the molding units, and a second cam surface for
5 causing the loading units to advance towards and between the upper plunger and the lower
6 plunger of the molding units.

Please add newly drafted Claims 56 and 57.

1 56. (New) A powder compression molding and assembly system comprising:

2 a rotary disk;

3 a plurality of molding units mounted on the rotary disk at spaced circumferential
4 locations, each of said plurality of molding units including a cylindrical die, a lower plunger
5 concentric with said cylindrical die, an upper plunger, and a center pin concentric with said
6 lower plunger for defining an annular space within said die for molding powder into tubular
7 configurations, as the plurality of the molding units are moved along a circular path;

8 a pair of pressure rollers provided at least at two equally spaced locations on the
9 movement path of the plurality of molding units for pressure engagement with the upper plunger
10 and the lower plunger, respectively, of each of said plurality of molding units;

11 a feed station for loading each cylindrical die with a powder material to be
12 molded by pressure engagement with the upper plunger and lower plunger into a pellet;

13 a plurality of operating units provided respectively to each of the plurality of
14 molding units and moved along a concentric path with the molding units, for transferring and
15 retractably positioning a case above and in alignment with the die of each of the molding units;
16 and

17 an insertion assembly station mounted at an appropriate position on a movement
18 path of the molding units for inserting the molded pellet into a case operatively positioned
19 outside of and in alignment with the die by an operating unit, the molded pellet is inserted into
20 the case by movement of the lower plunger while the center pin supports the molded pellet.

1 57. (New) The powder compression molding and assembly system according to
2 Claim 56, wherein each of the operating units comprises an operating lever operatively
3 connected to said cam follower, a support arm connected to said operating lever and rotatably
4 supported on the rotary disk, a case holding means mounted on said support arm, and a convey
5 jig detachably supported on the case holding means, said convey jig supporting the cylindrical
6 container such that an open end of the case faces downwards.